

**Memphis/Shelby County, Tennessee Ozone Attainment and Maintenance Plan**  
Effective Redesignation Date: 2/16/95 (60 FR 3352, 1/17/95)

**Background of Plan:** On November 15, 1990, the Clean Air Act Amendments of 1990 were enacted. The nonattainment designation of the Memphis and Shelby County area was continued by the operation of law pursuant to 107 (d) (1) (C) (i) of the 1990 Amendments, in conjunction with the Governor of Tennessee, EPA because the area violated the ozone standard during the period from 1987 to 1989. Upon designation, the Memphis and Shelby County area was classified as marginal under section 181(a) (1). During the period from 1990 through 1992 this area's ambient monitoring data showed no violations of the ozone National Ambient Air Quality Standards (NAAQS). In an effort to comply with the CAA and to ensure continued attainment of the NAAQS, on November 12, 1992, the state of Tennessee submitted for parallel processing an ozone maintenance State Implementation Plan (SIP) for the Memphis and Shelby County area and requested redesignation of the area to attainment with respect to the ozone NAAQS.

On May 14, 1993, the Memphis and Shelby County Health Department submitted evidence that a public hearing was held on the requests to redesignate Memphis and Shelby County from nonattainment of the NAAQS for ozone to attainment of the NAAQS for this pollutant. During the 1993 ozone season there were no violations of the standard reported. The revised request for redesignation submittal was approved by the TN Air Pollution Control Board on March 9, 1994. This request for revision of the federally approved SIP was reviewed by the EPA and found to be in conformance with the requirements of the 1990 CAA and was therefore published without prior proposal on August 4, 1994, pending a comment period. This proposal was withdrawn on October 26, 1994 due to the adverse comments received. Although Memphis violated the 1-hour ozone standard in the late 1990's, they implemented additional NO<sub>x</sub> controls on their large stationary sources, as required by their contingency measures, and have come back into attainment with this standard.

**Summary of Plan:** The SIP relies on an attainment level of emissions of volatile organic compounds (VOCs) and nitrogen oxides (NO<sub>x</sub>) to maintain the ozone standard through a combination of control measures. These measures include both stationary and mobile source controls. After the withdrawal, the EPA addressed those adverse comments in the final rule. In the final action the EPA approved the Memphis and Shelby County ozone maintenance plan, including the 1990 base year emission inventory, because it met the requirements of section 175A. In addition, the EPA redesignated the Memphis and Shelby County area to attainment for ozone because the state of Tennessee demonstrated compliance with the requirements for section 107 (d) (3) (E) for redesignation. The state also agreed to review the NO<sub>x</sub> controls, primarily on large fuel burning sources, if and when the standard is violated. On January 17, 1995, EPA approved the redesignation request.

**Control Measures:** A variety of control measures will be utilized and enforced such as:

- Reasonably Available Control Technology (RACT) for VOC sources not previously controlled
- Development of requirements to lower emissions of NO<sub>x</sub> from stationary fuel burning sources
- Federal Motor Vehicle Control Program

- Fuel Volatility
- Inspection/Maintenance (I/M) Program

**Contingency Measures:** Tennessee has submitted a maintenance plan based on the 1990 Base Year Inventory submitted in conformance with section 175A of the CAA. The maintenance plan includes a requirement to assess growth factors on a triennial basis with the contingency to assess on a yearly basis if the projection inventory is exceeded by 10% or more. The monitoring network in Memphis and Shelby County will be maintained in accordance with the regulatory requirements of 40 CFR part 58 with no reductions to the existing monitoring network. Control measures enacting the RACT will be implemented within 90 days of violation verification to the EPA. NO<sub>x</sub> regulations will be implemented within 2 years of the violation. The development and implementation of NO<sub>x</sub> requirements for stationary fuel burning sources is also included in the contingency plan.

**Motor Vehicle Emissions Budgets:** The applicable MVEB for the Memphis and Shelby county area for VOCs in 2002 was 101.8 tons/day and in 2004 is 144.5 tons/day. The applicable MVEB for the Memphis and Shelby county area for NO<sub>x</sub> in 2002 was 71.7 tons/day and in 2004 is 94.3 tons/day.

**Emission Reductions:** All future years' NO<sub>x</sub> emissions data are below the 1993 level, therefore, continued attainment is expected. The NO<sub>x</sub> levels projected for 1996 and 1999, although higher than the base year levels, are significantly lower than the 1993 levels, which also did not cause a violation of the standard. The projected levels for 2002 and 2004 are less than the attainment year of 1990. The EPA believed that the emissions projections demonstrated that the area would continue to maintain the ozone NAAQS because this area achieved attainment primarily through Volatile Organic Compounds (VOC) controls and reductions. The 1993 NO<sub>x</sub> reductions are a result of the implementation of the federal motor vehicle control program and I/M program in the area.

**Federal Register Actions:**

02/16/95	60 FR Page 3352	Approval and Promulgation of Implementation Plans and Designation of Areas for Air Quality Planning Purposes - Final Rule
04/20/99	64 FR Page 19281	Approval of Revisions to the Memphis Ozone Maintenance Plan - Direct Final Rule
04/20/99	64 FR Page 19331	Approval of Revisions to the Memphis Ozone Maintenance Plan - Proposed Rule

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